

## CLAIMS:

1. (Original) An irradiation device for irradiating a plurality of streams of capillary dimensions, said device comprising:

a substrate comprising a streambed for receiving a plurality of liquid streams of capillary dimensions;

capillaries in liquid transferring relationship with said streambed for forming said streams;

optical channels on opposite sides of said stream bed having reflecting walls confronting said streambed and parallel to the direction of said streams, one of said reflecting walls positioned for receiving light from light source and directing said light orthogonally through said streambed, and the other of said optical channels for reflecting said light to a light dump.

2. (Original) An irradiation device according to Claim 1, further comprising a laser light source positioned at an angle to said reflecting wall to direct light orthogonally from said reflecting wall.

3. (Original) An irradiation device according to Claim 2, wherein said reflecting walls are at 45° to the base of said device.

4. (Original) An irradiation device according to Claim 1, wherein said reflecting walls are at 45° to the base of said device.

5. (Original) An irradiation device according to Claim 1, wherein said streambed further comprises separating walls for physically separating said streams in said streambed, said separating walls at a 90° to said streambed.

6. (Original) An irradiation device according to Claim 1, further comprising sheath flow capillaries interspersed between said stream capillaries to provide liquid separation between said streams.

7. (Original) An irradiation device for irradiating a plurality of streams of capillary dimensions, said device comprising:

a substrate comprising a streambed for receiving a plurality of liquid streams of capillary dimensions, said streambed divided into a plurality of capillary-sized zones by perpendicular walls;

capillaries in liquid transferring relationship with said streambed for forming and directing individual streams into said zones;

electrokinetic means for moving said streams from said capillaries into said streambed; and

optical channels on opposite sides of said stream bed having reflecting walls confronting said streambed and parallel to the direction of said streams, one of said reflecting walls positioned for receiving light from light source and directing said light orthogonally through said streambed, and the other of said optical channels for reflecting said light to a light dump.

8. (Original) An irradiation device according to Claim 7, wherein said reflecting walls are coated with a reflecting coating.

9. (Original) An irradiation device according to Claim 7, wherein said optical channels are filled with air.

10. (Original) An irradiation device according to Claim 7, wherein said substrate is plastic and said stream bed is enclosed.

11. (Original) An irradiation device for irradiating a plurality of streams of capillary dimensions, said device comprising:

a substrate comprising a streambed for receiving a plurality of liquid streams of capillary dimensions;

a cover enclosing said streambed;

capillaries in liquid transferring relationship with said streambed for forming said streams;

electrokinetic means for moving said streams from said capillaries into said streambed;

sheath flow capillaries interspersed between said capillaries;

a reservoir in fluid transfer relationship with said sheath flow capillaries; and

optical channels on opposite sides of said stream bed having reflecting walls confronting said streambed and parallel to the direction of said streams, one of said reflecting walls positioned for receiving light from light source and directing said light orthogonally through said streambed, and the other of said optical channels for reflecting said light to a light dump.

12. (Original) An irradiation device according to Claim 11, wherein said reflecting walls are have a reflecting coating.

13. (Original) An irradiation device according to Claim 11, wherein said optical channels are filled with air.

14.-20. (Canceled)

21. (Original) An irradiation device for irradiating a stream of capillary dimensions, said device comprising:

a substrate comprising a streambed for receiving a liquid stream of capillary dimensions;

one or more capillaries in liquid transferring relationship with said streambed for forming said stream;

an optical channel on one side of said stream bed having reflecting walls confronting said streambed and parallel to the direction of said stream, one of said reflecting walls positioned for receiving light from light source and directing said light orthogonally through said streambed.

22. (Original) An irradiation device according to Claim 21 further comprising an optical channel on the other side of said stream bed having reflecting walls confronting said streambed and parallel to the direction of said stream, one of said reflecting walls positioned for reflecting light from said streambed to a light dump.

23. (Original) An irradiation device according to Claim 21 wherein said substrate comprises a streambed for receiving a plurality of liquid streams of capillary dimensions for irradiation.

24. (Original) An irradiation device according to Claim 22 wherein said substrate comprises a streambed for receiving a plurality of liquid streams of capillary dimensions for irradiation.